

The University of Chicago

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TRATIVE ORGANIZATION

A PART OF A DISSERTATION SUBMITTED TO THE FACULTY OF THE DIVISION OF SOCIAL
SCIENCES IN CANDIDACY FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

DEPARTMENT OF POLITICAL SCIENCE
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Decision-Making and Administrative Organization

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IT IS clear that the actual physical task of carrying out an organization's objectives falls to the persons at the lowest level of the administrative hierarchy. The automobile, as a physical object, is built not by the engineer or the executive, but by the mechanic on the assembly line. The fire is extinguished, not by the fire chief or the captain, but by the team of firemen who play a hose on the blaze.

It is equally clear that the persons above this lowest or operative level in the administrative hierarchy are not mere surplus baggage, and that they too must have an essential role to play in the accomplishment of the agency's objectives. Even though, as far as physical cause and effect are concerned, it is the machine-gunner, and not the major, who fights battles, the major will likely have a greater influence upon the outcome of a battle than will any single machine-gunner.

How, then, do the administrative and supervisory staff of an organization affect that organization's work? The nonoperative staff of an administrative organization participate in the accomplishment of the objectives of that organization to the extent that they influence the decisions of the operatives—the persons at the lowest level of the administrative hierarchy. The major can influence the battle to the extent that his head is able to direct the machine-gunner's hand. By deploying his forces in the battle area and assigning specific tasks to subordinate units, he determines for the machine-gunner where he will take his stand and what his objective will be. In

very small organizations the influence of all supervisory employees upon the operative employees may be direct, but in units of any size there are interposed between the top supervisors and the operative employees several levels of intermediate supervisors who are themselves subject to influences from above and who transmit, elaborate, and modify these influences before they reach the operatives.

If this is a correct description of the administrative process, then the construction of an efficient administrative organization is a problem in social psychology. It is a task of setting up an operative staff and superimposing on that staff a supervisory staff capable of influencing the operative group toward a pattern of coordinated and effective behavior. I have deliberately used the term "influencing" rather than "directing," for direction—that is, the use of administrative authority—is only one of several ways in which the administrative staff may affect the decisions of the operative staff; and, consequently, the construction of an administrative organization involves more than a mere assignment of functions and allocation of authority.

It is the operative employee who must be at the focus of attention in studying an organization, for the success of the structure will be judged by the way in which he performs within it. In this paper administrative theory will be approached from this standpoint: by analyzing the manner in which the decisions and behavior of operative employees are influenced by the organization.

Necessity for "Vertical" Specialization

MOST analyses of organization have emphasized "horizontal" specialization—the division of work—as the basic characteristic of organized activity. Luther Gulick, for example, in his "Notes on the Theory of Organization," says: "Work division is the foundation of organization; indeed, the reason for organization."¹

In this paper we shall be primarily concerned with "vertical" specialization—the division of decision-making duties between operative and supervisory personnel. Our first inquiry will be into the reasons why the operative employees are deprived of a portion of their autonomy in the making of decisions and subjected to the authority and influence of supervisors.

There would seem to be at least three reasons for vertical specialization in organization. First, if there is any horizontal specialization, vertical specialization is absolutely essential to achieve coordination among the operative employees. Second, just as horizontal specialization permits greater skill and expertise to be developed by the operative group in the performance of their tasks, so vertical specialization permits greater expertise in the making of decisions. Third, vertical specialization permits the operative personnel to be held accountable for their decisions: to the board of directors in the case of a business organization; to the legislative body in the case of a public agency.

Coordination. Group behavior requires not only the adoption of *correct* decisions, but also the adoption by all members of the group of the *same* decisions. Suppose ten persons decide to cooperate in building a boat. If each has his own plan, and they don't bother to communicate their plans, the resulting craft is not apt to be very seaworthy; they would probably have met with better success if they had adopted even a

very mediocre design, and if then all had followed this same design.

By the exercise of authority or other forms of influence, it is possible to centralize the function of deciding so that a general plan of operations will govern the activities of all members of the organization. This coordination may be either procedural or substantive in nature: by procedural coordination is meant the specification of the organization itself—that is, the generalized description of the behaviors and relationships of the members of the organization. Procedural coordination establishes the lines of authority and outlines the spheres of activity of each organization member, while substantive coordination specifies the content of his work. In an automobile factory, an organization chart is an aspect of procedural coordination; blueprints for the engine-block of the car being manufactured are an aspect of substantive coordination.

Expertise. To gain the advantages of specialized skill at the operative level, the work of an organization must be so subdivided that all processes requiring a particular skill can be performed by persons possessing that skill. Likewise, to gain the advantages of expertise in decision-making, the responsibility for decisions must be so allocated that all decisions requiring a particular skill can be made by persons possessing that skill.

To subdivide decisions is rather more complicated than to subdivide performance; for while it is not usually possible to combine the sharp eye of one workman with the steady hand of another to secure greater precision in a particular operation, it is often possible to add the knowledge of a lawyer to that of an engineer in order to improve the quality of a particular decision.

Frederick Taylor's theories of shop organization were primarily concerned with this aspect of the decision-making process. The purpose of his scheme of functional

¹ Luther Gulick and L. Urwick (eds.), *Papers on the Science of Administration*, p. 3.

foremanship was to make certain that the decisions respecting every aspect of the workman's job would be reached by a highly specialized and expert technician.

Responsibility. Writers on the political and legal aspects of authority have emphasized that a primary function of organization is to enforce the conformity of the individual to norms laid down by the group, or by its authority-wielding members. The discretion of subordinate personnel is limited by policies determined near the top of the administrative hierarchy. When the maintenance of responsibility is a central concern, the purpose of vertical specialization is to assure legislative control over the administrator, leaving to the administrative staff adequate discretion to deal with technical matters which a legislative body composed of laymen would not be competent to decide.

In designing an organization all three factors—expertise, coordination, and responsibility—must be given weight. Taylor's theory, for example, has been deservedly criticized for ignoring the factors of coordination and responsibility, while some of his critics can perhaps be accused of undervaluing the importance of expertise in decision-making. The real question is one of how much each of these aims is to be sacrificed to the others, and our present knowledge of administrative theory does not permit us to give any *a priori* answer to this question.

The Range of Discretion

THE term "influence" covers a wide range, both in the degree to which one person affects the behavior of another and in the method whereby that influence is exercised. Without an analysis of these differences of degree and kind no realistic picture can be drawn of an administrative organization. It is because of its failure to account for variations in influence that the usual organization chart, with its oversimplified representation of the "lines of

authority," fails to record the complexity of actual organizations. The organization chart does not reveal the fact that the actual exercise of authority may, and often does, cut across formal organizational lines, and that forms of influence other than authority—information, training, identification—may be far more important than the former in securing coordination throughout the organization.

Influence is exercised in its most complete form when a decision promulgated by one person governs every aspect of the behavior of another. On the parade ground, the marching soldier is permitted no discretion whatsoever. His every step, his bearing, the length of his pace are all governed by authority. Frederick the Great is reported to have found the parade-ground deportment of his Guards perfect—with one flaw. "They breathe," he complained. Few examples could be cited, however, from any other realm of practical affairs where influence is exercised in such complete and unlimited form.

Most often, organizational influences place only partial limits upon the exercise of discretion. A subordinate may be told what to do, but given considerable leeway as to how he will carry out the task. The "what" is, of course, a matter of degree also and may be specified within narrower or broader limits. The commands of a captain at the scene of a fire place much narrower limits on the discretion of the firemen than those placed on a fire chief by the city charter which states in general terms the function of the fire department.

Since influence can be exercised with all degrees of specificity, in order to determine the scope of influence or authority which is exercised in any concrete case, it is necessary to dissect the decisions of the subordinate into their component parts and then determine which of these parts are controlled by the superior and which are left to the subordinate's discretion.

Influence over Value and Fact. Any ra-

tional decision may be viewed as a conclusion reached from certain premises. These premises are of two different kinds: value premises and factual premises—roughly equivalent to ends and means, respectively. Given a complete set of value and factual premises, there remains only one unique decision which is consistent with rationality. That is, with a given system of values and a specified set of possible alternatives, there is one alternative of the set which is preferable to the others.

The behavior of a rational person can be controlled, therefore, if the value and factual premises upon which he bases his decisions are specified for him. This control can be complete or partial—all the premises can be specified, or some can be left to his discretion. The scope of influence, and conversely the scope of discretion, are determined by the number and importance of the premises which are specified and the number and importance of those which are left unspecified.

There is one important difference between permitting a subordinate discretion over value premises and permitting him discretion over factual premises. The latter can always be evaluated as correct or incorrect in an objective, empirical sense (of course, we do not always have the evidence we would need to decide whether a premise is correct or incorrect, but at least the terms "correct" and "incorrect" are applicable to a factual premise). To a value premise, on the other hand, the terms "correct" and "incorrect" do not apply. To say that a means is correct is to say that it is appropriate to its end; but to say that an end is correct is meaningless unless we redefine the end as a means to some more final end—in which case its correctness as means ceases to be a value question and becomes a factual question.

Hence, if only factual premises are left to the subordinate's discretion, there is, under the given circumstances, only one decision which he can correctly reach. On the

other hand, if value premises are left to the subordinate's discretion, the "correctness" of his decision will depend upon the value premises he selects, and there is no universally accepted criterion of right or wrong which can be applied to his selection.¹

This distinction between factual and value premises has an obvious bearing on the question of how discretion is to be reconciled with responsibility and accountability, and what the line of division is to be between "policy" and "administration." To pursue this subject further would take us beyond the bounds of the present analysis, and we leave it with a reference to two recent contributions to the problem.²

Implications for Unity of Command. When it is admitted that influence need extend to only a few of the premises of decision, it follows that more than one order can govern a given decision, provided that no two orders extend to the same premise. An analysis of almost any decision of a member of a formal organization would reveal that the decision was responsive to a very complex structure of influences.

Military organization affords an excellent illustration of this. In ancient warfare, the battlefield was not unlike the parade ground. An entire army was often commanded by a single man, and his authority extended in a very complete and direct form to the lowest man in the ranks. This was possible because the entire battlefield was within range of a man's voice and vision and because tactics were for the most

¹ In a sense, the discretion over factual questions which is left the operative is illusory, for he will be held accountable for reaching correct conclusions even with respect to those premises which are not specified in his orders. But it is a question of salient importance for the organization whether the subordinate is guided by orders in making his decision or whether he makes it on his own responsibility, subject to subsequent review. Hence, by "discretion" we mean only that standing orders and "on-the-spot" orders do not completely determine the decision.

² Wayne A. R. Leys, "Ethics and Administrative Discretion," 3 *Public Administration Review* 10-23 (Winter, 1943); and Herman Finer, "Administrative Responsibility in Democratic Government," 1 *Public Administration Review* 335-50 (Summer, 1941).

part executed by the entire army in unison.

The modern battlefield presents a very different picture. Authority is exercised through a complex hierarchy of command. Each level of the hierarchy leaves an extensive area of discretion to the level below, and even the private soldier, under combat conditions, exercises a considerable measure of discretion.

Under these circumstances, how does the authority of the commander extend to the soldiers in the ranks? How does he limit and guide their behavior? He does this by specifying the general mission and objective of each unit on the next level below and by determining such elements of time and place as will assure a proper coordination among the units. The colonel assigns to each battalion in his regiment its task; the lieutenant colonel to each company; the captain to each platoon. Beyond this the officer ordinarily does not go. The internal deployment of each unit is left to the officer in command of that unit. The United States Army Field Service Regulations specify that "an order should not trespass upon the province of a subordinate. It should contain everything that the subordinate must know to carry out his mission, but nothing more."¹

So far as field orders go, then, the discretion of a subordinate officer is limited only by the specification of the objective of his unit and its general schedule. He proceeds to narrow further the discretion of his own subordinates so far as is necessary to specify what part each sub-unit is to play in accomplishing the task of the whole.

Does this mean that the decision of the officer is limited only by his objective or mission? Not at all. To be sure, the field order does not go beyond this point, for it specifies only the "what" of his action. But the officer is also governed by the tactical doctrine and general orders of the army which specify in some detail the

"how." When the captain receives field orders to deploy his company for an attack, he is expected to carry out the deployment in accordance with the accepted tactical principles in the army. In leading his unit, he will be held accountable for the "how" as well as the "what."

The same kind of analysis could be carried out for the man who actually does the army's "work"—the private soldier; and we would see that the mass of influences that bear upon his decisions include both direct commands and tactical training and indoctrination.

We find, then, that to understand the process of decision in an organization it is necessary to go far beyond the on-the-spot orders which are given by superior to subordinate. It is necessary to discover how the subordinate is influenced by standing orders, by training, and by review of his actions. It is necessary to study the channels of communication in the organization in order to determine what information reaches him which may be relevant to his decisions. The broader the sphere of discretion left to the subordinate by the orders given him, the more important become those types of influence which do not depend upon the exercise of formal authority.

Once this complex network of decisional influences comes into view it becomes difficult to defend either the sufficiency or the necessity of the doctrine of "unity of command." Its sufficiency must be questioned on the same grounds that the sufficiency of the organization chart is questioned: at best it tells only a half-truth, for formal authority is only one aspect—and that probably not the most important—of organizational structure.

The necessity of "unity of command" must be questioned because there do not appear to be any *a priori* grounds why a decision should not be subject to several organizational influences. Indeed, a number of serious students of administration have advocated this very thing—we have

¹ U. S. Army Field Service Regulations (1941), p. 31.

already mentioned Taylor's theory of functional supervision—and their arguments cannot be waved aside with the biblical quotation that "no man can serve two masters."¹ It remains to be demonstrated that "unity of command" rather than "plurality of command" either is, or should be, the prevalent form of administrative structure.

Organizational Influences on the Subordinate

THUS far we have been talking about the extent of the organization's influence over its employees. Next we must consider the ways in which this influence is exerted. The subordinate is influenced not only by command but also by his organizational loyalties, by his strivings toward "efficient" courses of action, by the information and advice which is transmitted to him through the organization's lines of communication, and by his training. Each of these items deserves brief discussion.

Authority. The concept of authority has been analyzed at length by students of administration. We shall employ here a definition substantially equivalent to that put forth by C. I. Barnard.² A subordinate is said to accept authority whenever he permits his behavior to be guided by a decision reached by another, without independently examining the merits of that decision. When exercising authority, the superior does not seek to convince the subordinate, but only to obtain his acquiescence. In actual practice, of course, authority is usually liberally admixed with suggestion and persuasion.

An important function of authority is to permit a decision to be made and carried out even when agreement cannot be reached, but perhaps this arbitrary aspect of authority has been overemphasized. In

any event, if it is attempted to carry authority beyond a certain point, which may be described as the subordinate's "zone of acquiescence," disobedience will follow.³ The magnitude of the zone of acquiescence depends upon the sanctions which authority has available to enforce its commands. The term "sanctions" must be interpreted broadly in this connection, for positive and neutral stimuli—such as community of purpose, habit, and leadership—are at least as important in securing acceptance of authority as are the threat of physical or economic punishment.

It follows that authority, in the sense here defined, can operate "upward" and "sidewise" as well as "downward" in the organization. If an executive delegates to his secretary a decision about file cabinets and accepts her recommendation without re-examination of its merits, he is accepting her authority. The "lines of authority" represented on organization charts do have a special significance, however, for they are commonly resorted to in order to terminate debate when it proves impossible to reach a consensus on a particular decision. Since this appellate use of authority generally requires sanctions to be effective, the structure of formal authority in an organization usually is related to the appointment, disciplining, and dismissal of personnel. These formal lines of authority are commonly supplemented by informal authority relations in the day-to-day work of the organization, while the formal hierarchy is largely reserved for the settlement of disputes.

Organizational Loyalties. It is a prevalent characteristic of human behavior that members of an organized group tend to identify with that group. In making decisions their organizational loyalty leads them to evaluate alternative courses of action in terms of the consequences of their action for the group. When a person prefers a particular course of action because it

¹ For a recent advocacy of plural supervision, see Macmahon, Millet, and Ogden, *The Administration of Federal Work Relief* (Chicago: Public Administration Service, 1941), pp. 265-68.

² Chester I. Barnard, *The Functions of the Executive* (Cambridge: Harvard University Press, 1940), pp. 163ff.

³ Barnard calls this the "zone of indifference" (*op. cit.*, p. 169), but I prefer the term "acquiescence."

is "good for America," he identifies with Americans; when he prefers it because it will "boost business in Berkeley," he identifies with Berkeleyans. National and class loyalties are examples of identifications which are of fundamental importance in the structure of modern society.

The loyalties which are of particular interest in the study of administration are those which attach to administrative organizations or segments of such organizations. The regimental battle-flag is the traditional symbol of this identification in military administration; in civil administration, a frequently encountered evidence of identification is the cry: "Our Bureau needs more funds!"

The psychological bases of identification are obscure, but seem to involve at least three elements. First, personal success often depends upon organizational success—the administrator who can build up his unit expects (with good reason) promotion and salary increases. Second, loyalty seems based partly on a transfer to the field of public management of the spirit of competition which is characteristic of private enterprise. Third, the human mind is limited in the number of diverse considerations which can occupy the area of attention at one time, and there is a consequent tendency to overemphasize the importance of those elements which happen to be within that area. To the fireman, fires are the most serious human problem; to the health officer, disease, and so forth.

This phenomenon of identification, or institutional loyalty, performs one very important function in administration. If an administrator, each time he is faced with a decision, must perforce evaluate that decision in terms of the whole range of human values, rationality in administration is impossible. If he need consider the decision only in the light of limited organizational aims, his task is more nearly within the range of human powers. The fireman can concentrate on the problem of fires, the

health officer on problems of disease, without irrelevant considerations entering in.

Furthermore, this concentration on a limited range of values is almost essential if the administrator is to be held accountable for his decisions. When the organization's objectives are specified by some higher authority, the major value-premise of the administrator's decisions is thereby given him, leaving to him only the implementation of these objectives. If the fire chief were permitted to roam over the whole field of human values—to decide that parks were more important than fire trucks, and consequently to remake his fire department into a recreation department—chaos would displace organization, and responsibility would disappear.

Organizational loyalties lead also, however, to certain difficulties which should not be underestimated. The principal undesirable effect of identification is that it prevents the institutionalized individual from making correct decisions in cases where the restricted area of values with which he identifies must be weighed against other values outside that area. This is a principal cause of the interbureau competition and wrangling which characterizes any large administrative organization. The organization members, identifying with the bureau instead of with the over-all organization, believe the bureau's welfare more important than the general welfare when the two conflict. This problem is frequently evident in the case of "housekeeping" agencies, where the facilitative and auxiliary nature of the agency is lost sight of in the effort to force the line agencies to follow standard procedures.

Institutional loyalties also result in incapacitating almost any department head for the task of balancing the financial needs of his department against the financial needs of other departments—whence the need for a centrally located budget agency which is free from these psychological biases. The higher we go in the adminis-

trative hierarchy, the broader becomes the range of social values which must come within the administrator's purview, the more harmful is the effect of valuational bias, and the more important is it that the administrator be freed from his narrower identifications.

The Criterion of Efficiency. We have seen that the exercise of authority and the development of organizational identifications are two principal means whereby the individual's value premises are influenced by the organization. What about the issues of fact which underly his decisions? These are largely determined by a principle which underlies all rational behavior: the criterion of efficiency. In its broadest sense, to be efficient simply means to take the shortest path, the cheapest means, toward the attainment of the desired goals. The efficiency criterion is completely neutral as to what goals are to be attained.

The concept of efficiency has been discussed at length by economists and writers on administration, and there is little that can be added to that discussion within the scope of the present paper. Suffice it to say that the commandment: "Be efficient!" is a major organizational influence over the decisions of the members of any administrative agency; and a determination whether this commandment has been obeyed is a major function of the review process.¹

Advice and Information. Many of the influences the organization exercises over its members are of a less formal nature than those we have been discussing. These influences are perhaps most realistically viewed as a form of internal public relations, for there is nothing to guarantee that advice produced at one point in an organization will have any effect at another point in the organization unless the lines of communication are adequate to its transmission

and unless it is transmitted in such form as to be persuasive. It is a prevalent misconception in headquarters offices that the internal advisory function consists in preparing precisely-worded explanatory bulletins and making certain that the proper number of these are prepared and that they are placed in the proper compartment of the "router." No plague has produced a rate of mortality higher than the rate which customarily afflicts central-office communications between the time they leave the issuing office and the moment when they are assumed to be effected in the revised practice of the operative employees.

These difficulties of communication apply, of course, to commands as well as to advice and information. As a matter of fact, the administrator who is serving in an advisory capacity is apt to be at some advantage in solving problems of communication, because he is likely to be conscious of the necessity of transmitting and "selling" his ideas, while the administrator who possesses authority may be oblivious of his public-relations function.

Information and advice flow in all directions through the organization—not merely from the top downward. Many of the facts which are relevant to decision are of a rapidly changing nature, ascertainable only at the moment of decision, and often ascertainable only by operative employees. For instance, in military operations knowledge of the disposition of the enemy's forces is of crucial importance, and military organization has developed elaborate procedures for transmitting to a person who is to make a decision all relevant facts which he is not in a position to ascertain personally.

Information and advice may be used as alternatives to the actual exercise of authority, and vice versa. Where promptness and discipline are not primary considerations, the former have several very impressive advantages. Chief among these is that they preserve morale and initiative on the part

¹ For further discussion of the efficiency concept, see Clarence E. Ridley and Herbert A. Simon, *Measuring Municipal Activities* (Chicago: International City Managers' Association, 1943).

of the subordinate—qualities which may disappear if excessively harassed by authority. Again, when the influences are advisory in nature, the formal organization structure loses its unique position as the sole channel of influence. The relation between the adviser and the person advised is essentially no different when they are members of the same organization than when the adviser is outside the organization. The extent of the influence of the adviser will depend on the desire of the decision-maker for advice and on the persuasiveness with which it is offered.

Training. Like institutional loyalties, and unlike the other modes of influence we have been discussing, training influences decisions "from the inside out." That is, training prepares the organization member to reach satisfactory decisions himself, without the need for the constant exercise of authority or advice. In this sense, training procedures are alternatives to the exercise of authority or advice as means of control over the subordinate's decisions.

Training may be of an in-service or a pre-service nature. When persons with particular educational qualifications are recruited for certain jobs, the organization is depending upon this pre-training as a principal means of assuring correct decisions in their work. The mutual relation between training and the range of discretion which may be permitted an employee is an important factor to be taken into consideration in designing the administrative organization. That is, it may often be possible to minimize, or even dispense with, certain review processes by giving the subordinates training which enables them to perform their work with less supervision. Similarly, in drafting the qualifications required of applicants for particular positions, the possibility should be considered of lowering personnel costs by drafting semi-skilled employees and training them for particular jobs.

Training is applicable to the process of

decision whenever the same elements are involved in a large number of decisions. Training may supply the trainee with the facts necessary in dealing with these decisions, it may provide him a frame of reference for his thinking, it may teach him "approved" solutions, or it may indoctrinate him with the values in terms of which his decisions are to be made.

Training, as a mode of influence upon decisions, has its greatest value in those situations where the exercise of formal authority through commands proves difficult. The difficulty may lie in the need for prompt action, in the spatial dispersion of the organization, or in the complexity of the subject matter of decision which defies summarization in rules and regulations. Training permits a higher degree of decentralization of the decision-making process by bringing the necessary competence into the very lowest levels of the organizational hierarchy.

Implications for Organization. It can be seen that there are at least five distinct ways in which the decisions of operative employees may be influenced: authority, identification, the efficiency criterion, advice, and training. It is the fundamental problem of organization to determine the extent and the manner in which each of these forms of influence is to be employed. To a very great extent, these various forms are interchangeable—a fact which is far more often appreciated in small than in large organizations.

The simplest example of this is the gradual increase in discretion which can be permitted an employee as he becomes familiar with his job. A secretary learns to draft routine correspondence; a statistical clerk learns to lay out his own calculations. In each case, training has taken the place of authority in guiding the employee's decisions.

Another illustration is the process of functional supervision whereby technical experts are given advisory, but not usually

authoritative, relations with subordinate employees. This substitution of advice for authority may prove necessary in many situations in order to prevent conflicts of authority between line officers, organized on a geographical basis, and functional experts, organized along subject-matter lines. To the extent that these forms of influence supplement, or are substituted for, authority, the problem of influence becomes one of education and public relations, as has already been explained.

Administrators have increasingly recognized in recent years that authority, unless buttressed by other forms of influence, is relatively impotent to control decision in any but a negative way. The elements entering into all but the most routine decisions are so numerous and so complex that it is impossible to control positively more than a few. Unless the subordinate is himself able to supply most of the premises of decision, and to synthesize them adequately, the task of supervision becomes hopelessly burdensome. To cite an extreme illustration: no amount of supervision or direction, and no quantity of orders, directives, or commands, would be sufficient to enable a completely untrained person to prepare a legal brief for a law suit. In such a case, the problem is definitely not one of direction, but one of education or training.

Viewed from this standpoint, the problem of organization becomes inextricably interwoven with the problem of recruitment. For the system of influence which can effectively be used in the organization will depend directly upon the training and competence of employees at the various levels of the hierarchy. If a welfare agency can secure trained social workers as interviewers and case workers, broad discretion can be permitted them in determining eligibility, subject only to a sampling review and a review of particularly difficult cases. If trained workers can be obtained only for supervisory positions, then the supervisors

will need to exercise a much more complete supervision over their subordinates, perhaps reviewing each decision and issuing frequent instruction. The supervisory problem will be correspondingly more burdensome than in the first example, and the effective span of control of supervisors correspondingly narrower.

Likewise, when an organization unit is large enough so that it can retain within its own boundaries the specialized expertise that is required for some of its decisions, the need for functional supervision from other portions of the organization becomes correspondingly less. When a department can secure its own legal, medical, or other expert assistance, the problems of functional organization become correspondingly simpler, and the lines of direct authority over the department need less supplementation by advisory and informational services.

Hence, problems of organization cannot be considered apart from the specifications and actual qualifications of the employees who are to fill the positions established by the organization. The whole subject of job classification must be brought into close coordination with the theory of organization. The optimum organizational structure is a variable, depending for its form upon the staffing of the agency. Conversely, the classification of a position is a variable, depending upon the degree of centralization or decentralization which is desired or anticipated in the operation of the organizational form.

The Communication of Influence

IT HAS already been pointed out that if it is wished to bring orders or advice to bear on the decisions of a subordinate, the orders or advice must be communicated to the subordinate; and that this communication is not merely a matter of physical transmission, but a process of actually inducing changes in the subordinate's behavior. The costs of the communication process are

comparable to, and as real as, a manufacturer's advertising costs.

A manufacturer determines his advertising budget by the amount by which additional advertising will increase sales. When the additional receipts he expects are no longer sufficient to cover the additional advertising and manufacturing costs, he stops the expansion of his advertising program. An approach of a very similar kind needs to be introduced in the designing of administrative organizations. The cost of "producing" decisions in the supervisory staff and the cost of communicating these decisions to the operating personnel must be weighed against the expected increase in effectiveness of the latter.

The different forms of organizational influence must be balanced against each other in the same way. A training program involves a large initial investment in each operative employee, but low "maintenance" costs; orders and commands require no initial investment, but high and continuous costs of "production" and communication; if pre-trained employees are recruited, salaries may be higher, but a less elaborate supervisory structure will be required; and so forth. Again, we have reached a question of *how much*, and theory, without data, cannot give us an answer.

Administrative Processes for Insuring Correct Decisions

HAVING analyzed the various kinds of influence which condition the decisions of members of administrative organizations, we turn next to some concrete administrative processes to see how they fit into our scheme of analysis. The first of these is planning—the process whereby a whole scheme is worked out in advance before any part of it is carried out through specific decisions. The second of these is review—the process whereby subordinates are held to an accounting for the quality of

their decisions and of the premises from which these decisions were reached.

Planning. Plans and schedules are ordinarily carried into effect by the exercise of authority, but of greater importance than this final act of approving or authorizing a plan are the decisional processes which go into the making of the plan. Planning is an extremely important decision-making process because of the vast amount of detail that can be embodied in the plan for a complex project and because of the broad participation that can be secured, when desirable, in its formulation.

As a good illustration of this we may summarize the procedure a navy department goes through in designing a battleship, as described by Sir Oswyn A. R. Murray. First, the general objectives are set out—the speed, radius of action, armor, and armament it is desired to attain in the finished design. Next, several provisional designs are developed by a staff of "generalists" who are familiar with all aspects of battleship design. On the basis of these alternative provisional designs, a final decision is reached on the general lines of the new ship. At this point the specialists are brought in to make recommendations for the detailed plan. Their recommendations will often require modification of the original design, and they will often recommend mutually conflicting requirements. To continue with Sir Oswyn's description:

In this way the scheme goes on growing in a tentative manner, its progress always being dependent upon the cooperation of numbers of separate departments, all intent upon ensuring the efficiency of different parts, until ultimately a more or less complete whole is arrived at in the shape of drawings and specifications provisionally embodying all the agreements. This really is the most difficult and interesting stage, for generally it becomes apparent at this point that requirements overlap, and that the best possible cannot be achieved in regard to numbers of points within the limits set to the contractors. These difficulties are cleared up by discussion at round-table conferences, where the compromises which will least impair the value of the ship are agreed upon, and

the completed design is then finally submitted for the Board's approval. Some fourteen departments are concerned in the settlement of the final detailed arrangements.¹

The point which is so clearly illustrated here is that the planning procedure permits expertise of every kind to be drawn into the decision without any difficulties being imposed by the lines of authority in the organization. The final design undoubtedly received authoritative approval, but, during the entire process of formulation, suggestions and recommendations flowed freely from all parts of the organization without raising the problem of "unity of command." It follows from this that to the extent to which planning procedures are used in reaching decisions, the formal organization has relevance only in the final stages of the whole process. So long as the appropriate experts are consulted, their exact location in the hierarchy of authority need not much affect the decision.

This statement must be qualified by one important reservation. Organizational factors are apt to take on considerable importance if the decision requires a compromise among a number of competing values which are somewhat incompatible with each other. In such a case, the focus of attention and the identifications of the person who actually makes the decision are apt to affect the degree to which advice offered him by persons elsewhere in the organization actually influences him.

Our illustration of the warship throws into relief the other aspect of the planning process which was mentioned above: that the plan may control, down to minute detail, a whole complex pattern of behavior—in this case, the construction of the battleship down to the last rivet. The task of the construction crew is minutely specified by this design.

Review. Review enables those who are in a position of authority in the administra-

tive hierarchy to determine what actually is being done by their subordinates.

Review may extend to the results of the subordinate's activities measured in terms of their objectives; to the tangible products, if there are such, of his activities; or to the method of their performance.

When authority is exercised through the specification of the objective of the organizational unit, then a primary method of review is to ascertain the degree to which the organizational objective is attained—the results of the activity. A city manager, for instance, may evaluate the fire department in terms of fire losses, the police department in terms of crime and accident rates, the public works department in terms of the condition of streets and the frequency of refuse collection.

A second very important method of review is one which examines each piece of completed work to see whether it meets set requirements of quantity and quality. This method assumes that the reviewing officer is able to judge the quality and quantity of the completed work with a certain degree of competence. Thus, a superior may review all outgoing letters written by his subordinates, or the work of typists may be checked by a chief clerk, or the work of a street repair crew may be examined by a superintendent.

It has not often enough been recognized that in many cases the review of work can just as well be confined to a randomly selected sample of the work as extended to all that is produced. A highly developed example of such a sampling procedure is found in the personnel administration of the Farm Credit Administration. This organization carries out its personnel functions on an almost completely decentralized basis, except for a small central staff which lays down standards and procedures. As a means of assuring that local practices follow these standards, field supervisors inspect the work of the local agencies and, in the case of certain personnel procedures

¹ "The Administration of a Fighting Service," 1 *Journal of Public Administration* 216-17 (July, 1923).

such as classification, the setting of compensation scales, and the development of testing materials, assure themselves of the quality of the work by an actual inspection of a sample of it.

The third, and perhaps simplest, method of review is to watch the employee at work, either to see that he puts in the required number of hours, or to see that he is engaging in certain movements which if continued will result in the completion of the work. In this case, the review extends to procedures and techniques, rather than to the product or results. It is the prevalent form of review at the foremanship level.

To determine what kind of a review method should be employed in any concrete administrative situation, it is necessary to be quite clear as to what this particular review process is to accomplish. There are at least four different functions which a review process may perform: diagnosis of the quality of decisions being made by subordinates, modification through influence on subsequent decisions, the correction of incorrect decisions which have already been made, the enforcement of sanctions against subordinates so that they will accept authority in making their decisions.¹

In the first place, review is the means whereby the administrative hierarchy learns whether decisions are being made correctly or incorrectly, whether work is being done well or badly at the lower levels of the hierarchy. It is a fundamental source of information upon which the higher levels of the hierarchy must rely heavily for their own decisions. With the help of this information, improvements can be introduced into the decision-making process.

This leads to the second function of review—to influence subsequent decisions. This is achieved in a variety of ways. Or-

ders may be issued covering particular points on which incorrect decisions have been made or laying down new policies to govern decisions; employees may be given training or retraining with regard to those aspects of their work which review has proved faulty; information may be supplied them, the lack of which has led to incorrect decisions. In brief, change may be brought about in any of the several ways in which decisions can be influenced.

Third, review may perform an appellate function. If the individual decision has grave consequences, it may be reviewed by a higher authority, to make certain that it is correct. This review may be a matter of course, or it may occur only on appeal by a party at interest. The justification of such a process of review is that (1) it permits the decision to be weighed twice, and (2) the appellate review requires less time per decision than the original decision, and hence conserves the time of better-trained personnel for the more difficult decisions. The appellate review may, to use the language of administrative law, consist in a consideration *de novo*, or may merely review the original decision for substantial conformity to important rules of policy.

Fourth, review is often essential to the effective exercise of authority. Authority depends to a certain extent on the availability of sanctions to give it force. Sanctions can be applied only if there is some means of ascertaining when authority has been respected, and when it has been disobeyed. Review supplies the person in authority with this information.

Decision making is said to be centralized when only a very narrow range of discretion is left to subordinates; decentralized when a very broad range of discretion is left. Decision making can be centralized either by using general rules to limit the discretion of the subordinate or by taking out of the hands of the subordinate the actual decision-making function. Both of these processes fit our definition of cen-

¹ A somewhat similar, but not identical, analysis of the function of review can be found in Sir H. N. Bunbury's paper, "Efficiency as an Alternative to Control," 6 *Public Administration* 97-98 (April, 1928).

tralization because their result is to take out of the hands of the subordinate the actual weighing of competing considerations and to require that he accept the conclusions reached by other members of the organization.

There is a very close relationship between the manner in which the function of review is exercised and the degree of centralization or decentralization. Review influences decisions by evaluating them and thereby subjecting the subordinate to discipline and control. Review is sometimes conceived as a means of detecting wrong decisions and correcting them. This concept may be very useful as applied to those very important decisions where an appellate procedure is necessary to conserve individual rights or democratic responsibility; but, under ordinary circumstances, the function of correcting the decisional processes of the subordinate which lead to wrong decisions is more important than the function of correcting wrong decisions.

Hence, review can have three consequences: (1) if it is used to correct individual decisions, it leads to centralization and an actual transfer of the decision-making functions; (2) if it is used to discover where the subordinate needs additional guidance, it leads to centralization through the promulgation of more and more complete rules and regulations limiting the subordinate's discretion; (3) if it is used to discover where the subordinate's own resources need to be strengthened, it leads to decentralization. All three elements can be, and usually are, combined in varying proportions in any review process.

Summary

WE MAY NOW briefly retrace the path we have traveled in the preceding pages. We have seen that a decision is analogous to a conclusion drawn from a number of premises—some of them factual and some ethical. Organization involves a "horizontal" specialization of work and a "vertical"

specialization in decision making—the function of the latter being to secure coordination of the operative employees, expertness in decision making, and responsibility to policy-making agencies.

The influence of an organization, and its supervisory employees, upon the decisions of the operative employees can be studied by noting how the organization determines for the operative employee the premises—factual and ethical—of his decisions. The organization's influence is a matter of degree. As we travel from top to bottom of the administrative hierarchy, we note a progressive particularization of influence. Toward the top, discretion is limited by the assignment of broad objectives and the specification of very general methods; lower in the hierarchy, more specific objectives are set, and procedures are determined in greater detail.

Within the limits fixed by his superiors, each member of the organization retains a certain sphere of discretion, a sphere within which he is responsible for the selection of premises for decision. For the most part, this sphere of discretion lies within the factual area of the decisional process rather than within the area of values; but the individual's decision is not "free" even within the area of discretion, in the sense that his superiors are indifferent what decision he will make. On the contrary, he will be held for the correctness of his decision even within that area.

There are at least five ways in which influence is exerted over the individual: (1) authority, (2) identification, (3) the criterion of efficiency, (4) advice and information, and (5) training. To a large extent, these are interchangeable, and a major task of administration is to determine to what extent each will be employed. The structure of influence in an organization and the lines of communication are far more complex than the structure of authority. In designing an organization, it is not enough to establish lines of authority; it is equally

important to determine the ways in which all forms of influence are to be exercised.

Two organizational processes are of particular importance to decision making: planning and review. Planning permits the control of decisions in very great detail and permits all the available expertise to be brought to bear on a particular decision, with little concern for the lines of formal authority. Review is a source of informa-

tion to the administrative hierarchy, a means of influencing subsequent decisions of subordinates, a means for correcting decisions on important individual matters, and a means for enforcing authority by determining when sanctions need to be applied. Depending upon the way in which they are employed, review processes may lead either to the centralization or to the decentralization of decision making.

